**Variables Used to Generalize Properties**

In primary grades, students begin to understand the regularities in number operations, and begin to make generalizations about number properties. They also learn that number expressions with variables can be used to represent these properties. On the chart, match the number properties to be learned by students to the generalized expressions which show how variables might be used to express each property.

A Guide to Effective Instruction in Mathematics, Kindergarten to Grade 3 – Patterning and Algebra, page 31

**Variables**

A variable is a letter or symbol that is used to represent and unknown quantity (e.g., ◼ + 4 = 12), a value that can vary (e.g., 4 + ⭘ =🞎), or a generalized number property (e.g., a + b = b + a). In the primary grades, geometric shapes, rather than letters, are often used as variables, since in the early stages of learning to read, students identify letters as sounds, rather than as quantities.

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